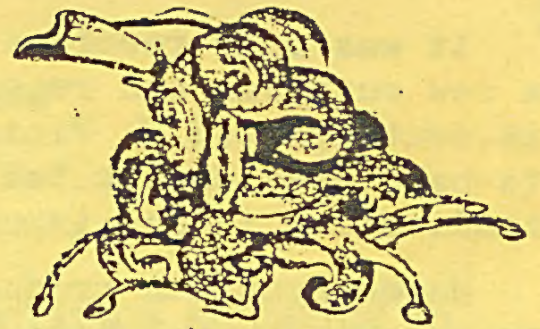


CASTLEMAINE
NATURALIST

SEPT 82

Nº 72

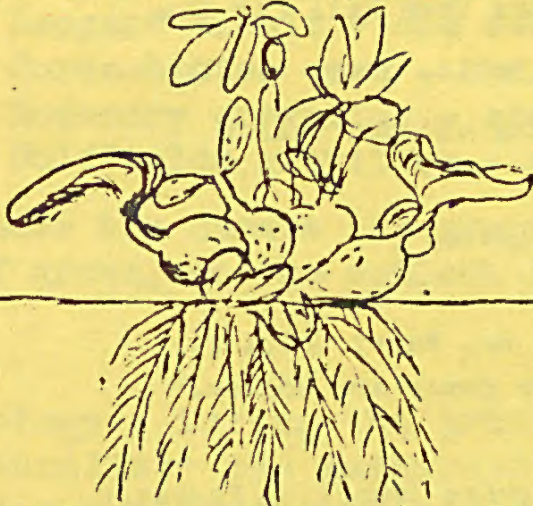


coming into flower —
Grevillea alpina
Gold fields *Grevillea*'

IMPORTED PLANTS THREATEN OUR WATERWAYS

Nº I; Water Hyacinth

Every Field Naturalist should be aware of various types of introduced plants that were in most cases bought here for decorative purposes. We all know how the South African Boneseed has taken over the You Yangs and the Mornington Peninsular. In fact I have removed a dozen plants growing wild in the scrub of the Castlemaine Cemetery. But a more serious danger exists in the amazing growth



WATER
HYACINTH

of certain exotic species which have spread through our inland and coastal river systems. Number I enemy is the deceptively pretty Water Hyacinth.

Regarded as the world's most troublesome water weed, it came originally from South America and has spread to North America, Africa, Asia and Australia. This has all taken place since 1890.

In its native South America it is largely controlled by a combination of natural enemies and flooding each year in the rivers where it lives.

It was first noticed in Brisbane, Sydney and Grafton about 1894 where its attractive flowers and ability to grow easily in garden ponds ensured its rapid growth around the country. By the turn of the century it had become naturalised in the coastal areas of Queensland and New South Wales. By 1939 it was growing in Victoria and South Australia and now has been recorded as thriving in every State or Territory except Tasmania.

People continue to spread the weed mainly by throwing plants from their backyard fish ponds into nearby streams and swamps.

It was only recorded in Darwin 10 years ago and more recently a new outbreak was reported from Wagga N.S.W. So far all outbreaks in southern N.S.W. Victoria and eastern South Australia are thought to have been eradicated but in the warmer areas in the North eradication is now impossible.

Water Hyacinth produces seeds and seedlings which helps to colonise areas which have been cleared, but the main regeneration is by fragments of stems carried in the stream. It can tolerate a wide range of conditions, even frost, as the plant is not killed unless the upper parts of the underwater rhizomes become frozen.

By Terry Collins

WESTERN VICTORIAN FIELD NATURALISTS CLUB ASSOCIATION.

CRESWICK F.N.C. CAMPOUT AT CLUNES & CRESWICK.

23rd & 24th October 1982.

PROGRAM --

- SATURDAY - 1.00 p.m. Assemble Clunes Town Hall Bailey St.
1.30 p.m. Depart for Mt. Beckwith. Wildflowers.Birds.
4.30 p.m. Return to Clunes Town Hall for Tea.
5.00 p.m. Hot water, tea, milk, sugar available.
6.30 p.m. Delegates Meeting at Town Hall.
Annual Meeting.
Election of Officers.
General Meeting.
8.00 p.m. Guest Speaker - Mr. Barry Golding.
Subject - "Where Homes are Hollow."
Supper.
- SUNDAY -- 9.30 a.m. Assemble at Creswick School of Forestry
Gates. Turn east at Creswick Town Hall
Corner. Gates opposite Football Ground.
10.30 a.m. Depart for State Nursery, Castlemaine Rd.
Creswick. Demonstration of soil mixing
and propagation. Lunch at Nursery.
Hot water etc. available.
- DEPART - 1.30 p.m. Drive through State Forest to Koala Park.
3.30 p.m. Break up. Hot water available for
afternoon tea.

President - H. Barclay. 34 Raglan St. Creswick.Ph. 053-452191.

THE VICTORIAN FIELD NATURALISTS CLUB MEETING

THE VICTORIAN FIELD NATURALISTS CLUBS ASSOCIATION EXCURSION TO THE BENDIGO WHIPSTICK ON 28/8/82

The August meeting of the W.V.F.N.C.A. had a record attendance, with 13 clubs represented. The generosity of the Field Naturalists Club of Victoria in providing a bus helped to make the excursion most enjoyable, despite the lack of flowers.

Only the Whirrakee wattle seemed unaffected by the frosts and drought, and made its usual magnificent spectacle, with whole hillsides a mass of yellow bloom.

A complete list of the other plants in flower is:-

- Rough wattle - a few in flower only
- Golden wattle - a few flowers only
- Rosy heath-myrtle - some good patches
- Pink fingers - only one found.
- Blue caladenia - at least a dozen found
- Leopard orchid - one dwarfed plant in flower.
- Gorse bitter-pea - one bush in flower.
- Rosemary grevillea - about 1/3 of the bushes with a flower.
- Goldfields grevillea - a few flowers seen on some plants.

Under the shrubs the ground was bare and dry, without a trace of green, so the outlook for late spring is not very good. E.P.

Apology : During the printing of the yellow August 'Castlemaine Naturalist' the Authoress' name disappeared from the article and poem about the Little River Aboriginal Bora Ground. It was Audrey Bruton. *ed.*

LODDON-CAMPASPE STRATEGY PLAN

The Loddon-Campaspe Regional Planning Authority is asking for comment about major issues in the region, so that it can co-ordinate regional policies. The comments printed on the next page give background information. Comments should be sent to The Secretary, Loddon-Campaspe Regional Planning Authority, 391 Hargreaves Street, Bendigo Vic., 3550. Closing date is 24th September, 1982.

THE SPREAD OF SALINITY

Salinity is becoming a major regional problem, not only in the irrigation areas but also in the dry farming districts.

The development and intensified use of irrigation procedures in the northern parts of the Region have created problems associated with rising groundwater levels and high salinity. The complex inter-relationships between groundwater tables, quantities of water used for irrigation, soils and salinity conditions have major implications for the types of crops grown and the farming practices in the area.

Dryland soil salting is becoming increasingly widespread and the obvious effects of the accumulation of salt on or in the soil are accompanied by a rise in salinity of streams, waterholes and dams and the erosion of salt affected areas. For example, stream salinity in the Avoca River and Bet Bet Creek often reaches intensities greater than the salinity of sea water.

The emergence of saline groundwater is the principal cause of permanent salting. Clearing of forests and its replacement with shallow rooted pastures promotes the movement of soil salts to the adjacent valley floor where they either accumulate or are carried into streams. Clearing also allows more water to reach the saline groundwater zone by eliminating water usage through evapo-transpiration, thus raising the water table and producing salting on valley floors and lower slopes.

As agricultural production decreases through salting, incomes are diminished, social tension at family level occurs, land values decrease and rural communities become less prosperous and less viable. The effect is environmental, economic and social.

The State Rivers and Water Supply Commission is developing complex drainage and diversion schemes to reduce salinity in the irrigated northern parts of the Region.

There are two approaches to the dry land salinity problem. Firstly, the treatment of local symptoms; a short-term measure which includes fencing-out, drainage, treatment with gypsum and the establishment of salt-tolerant plant species. Success has not always been achieved and much research is still needed. Also, measures such as drainage may merely transfer the problem from one site to another. The second approach is a long-term one based on the hydrological cycle and involves the removal of large quantities of sub-surface water. If high-yielding aquifers are involved, water can be removed directly by pumping. At the same time an attempt to lower water tables can be made by establishing deep-rooted plant species, especially trees. In this case large catchments must be treated as a whole.

Wide-ranging, detailed research and planning is urgently needed if satisfactory solutions to the salting problems are to be found. The continued spread of salt affected land is damaging the stability and progress of Northern Victoria.

THE CONTROL OF FLOODING

Widespread areas mainly in the north of the Region are regularly affected by flooding. Flooding has economic and social effects as it causes loss of farm income, severe damage to personal property, disruption to water supplies and damage to roads.

Increasing urbanization and clearing in catchments has increased the severity of flooding. The construction of levees, land formation, and development and land use in floodways can affect flood flows and cause additional areas to be flooded. Improving the hydraulic efficiency of streams can damage the environment of the streams for wildlife and for recreation. The draining of swamps and wetlands can destroy wildlife habitat and can result in a loss of flood storage capacity.

There is a need for the development of catchment-wide flood management plans which take account of these conflicting interests. The Water Commission has begun this work with the Lower Loddon and Bendigo Creek flood studies. Local Councils will need to control works and land use in flood areas.

THE EFFECTS OF MINING

Mining, which has experienced an upsurge of interest in recent years, is one of the more controversial issues in the Region.

Rising gold prices and the ready availability of metal detectors were largely responsible for the recent revival of gold prospecting. The 'golden triangle' area, between Wedderburn, Inglewood and Dunolly, received an infusion of prospectors' money and the caravan parks thrived.

The interest in private prospecting declined in association with the fall in gold prices. However this has not deterred the companies involved in mining. Economic benefits to the Region in the form of employment opportunities are already evident. Although at present on a limited scale, these benefits could become substantial if large scale mineral deposits are discovered and developed.

Surface drilling exploration is currently taking place at several sites in the Bendigo area. If promising results are forthcoming from the drill samples, the Company may decide to carry out an underground exploration. If economic gold or other mineral deposits are found in the Bendigo area, the local economy would receive a substantial boost in the form of money and jobs.

Unfortunately mining has its disbenefits too; the major one being its effect on the environment. The use of bulldozers for working claims and shallow stripping is already causing concern in the Wedderburn area. The development of appropriate arrangements for the rehabilitation of worked areas is also important.

Some larger mining companies have become involved in the de-watering of mines. The water, being from an underground source, generally has a high total dissolved salts content. Problems arise with the disposal of the water as the salinity level generally precludes it from being pumped into rivers or streams. Evaporation dams are one acceptable means of disposal.

CONSERVATION OF THE NATURAL ENVIRONMENT AND CULTURAL HERITAGE

The Region's natural environment and cultural heritage offer opportunities and reveal constraints which have implications for future land use and management.

Natural Environment

The Region possesses flora and fauna areas that are unique to both the Region and the State (eg. Whipstick, Wychitella). The significance of these areas include the existence of plant associations that are under threat of extinction and areas of moderate and high vulnerability in terms of the susceptibility to future human activity. In developing policy choices for the management and use of these areas, emphasis should be placed on preserving and protecting these features from indiscriminate uses or development.

Over successive generations, much of the privately owned land has been cleared for farming purposes. The environmental effects of excessive clearing are now well recognized and include, soil erosion, lack of regeneration, loss of wildlife habitats. Furthermore, the maintenance of bushland enhances water quality and protects against salinity, however it can also pose fire risks and heighten the instance of flooding around streams and lakes. Having regard to the positive and negative attributes of promoting and maintaining bushland, policy options should encompass the adoption of appropriate controls to regulate further clearing and assistance in the form of subsidies to establish tree planting programs.

Other land use activities that may conflict with conservation include the effects of mining and other extractive industries. Policy options of minimizing landscape degradation can be achieved through the use of controls and conditions to rehabilitate the landscape as close as possible to its original state, upon completion of the activity. Recreation can also have a detrimental effect on the environmental resource upon which it was founded (eg. water based recreation at Lake Eppalock). Controls relating to the regulation or restriction of recreational use are needed where the threat of environmental damage is likely.

The Region has many geological formations that constitute conservation features of high significance (eg. Barfold Gorge, Melville Caves). In considering the respective conservation merits of these features, policy options will entail the adoption of a range of controls including planning controls, reservation and public management, and in some cases termination of activities and declaration as a geological monument.

Cultural Heritage

The cultural heritage of the Region, to a great extent, lies in the history of the search for gold. Many buildings and features are valuable relics of the past age. Concern for this heritage has enabled many buildings to be placed on the Register of Historic Buildings or classified by the National Trust in accordance with the relative importance attached to their preservation.

Policy options in the area of historic preservation will need to be developed within the various forms of management and control that operate with respect to both public and freehold tenure. There is scope for inclusion of controls in Local Government Planning Schemes, where in the view of Council and the local community, the historic character of a town or its features are worthy of preservation solely for heritage purposes or for promoting the historic site or area as a tourist attraction.

The Region also possesses sites and areas containing features of high archaeological significance. Their presence and importance is analogous to architecturally historic features, therefore deserving the same treatment in terms of preservation measures and controls.

Late in September 1918, whilst back in my boyhood home near the boundary of Longlea and Junortoun, seven miles East of Bendigo, I was asked by Mr. E.E. Pescott to forward wild flowers for a Show being held in the St. Kilda Town Hall by Melbourne Field Naturalists.

Neighbours joined me in collecting local flowers, and during our search Misses L. and W. Bennett found a patch of double wax (*Eriostemon Verrucosus*) plants in full bloom. One of the plants was photographed by Mr. J. Bennett. The negative and prints of this are still held by his daughters, my wife and Miss W. Bennett, both members of our club, and clearly show the very attractive double flowers. Eleven plants were in close proximity, suggesting increase by suckering. The plants appeared to be very old.

Sprays of the *Eriostemon* and a collection of orchids, including albino form of *Glossodia Major* and a *Thelymitra*, were forwarded to Mr. Pescott. From his reply, dated 2/10/18, a copy of which is appended, it appears this was the first time this form of *Eriostemon* had been brought to the notice of Melbourne botanists.

I twice forwarded cuttings as requested, but "the Botanic Gardens folk" had no success with them.

Mr. Pescott included a photograph of the double *Eriostemon* with his letter of 2/10/18. I still have it, now somewhat faded. In 1942 a photograph of Double Bendigo Fairy Wax Flower appeared in a booklet of Australian Wild Flowers, No. 9. of a series issued by the Shell Company of Australia Ltd. This reproduction is identical with the photograph sent to me by Mr. Pescott in 1918.

The eleven plants of *Eriostemon* were still there when we left the district in 1932, but by 1955 only three plants, one of which appeared to be young, remained, the others having been removed or died. On our next visit we found the three remaining plants had been dug up by persons unknown, leaving only the evidence of three holes where the plants had been.

It may be of interest to Members to know that the Duck orchid, *Caleana major*, grew around the double *Eriostemon*. We have known *Caleana major* and *Caleana minor* orchids in this area for over sixty years, *Caleana major* being plentiful most years, *Caleana minor* in smaller numbers, and we lost it for years, but were pleased to find it again, in the same area, last year.

From 1918 onwards we noted any mention of double *Eriostemon* in other areas, and here, in brief, is the information gathered.

My mother spoke of seeing, in approximately 1970 a plant growing near McIvor Road, opposite the present site of Woodbury House.

Mr. DeRavin knew of a plant at Mandurang. He would not give the precise area.

The late Dr. W.J. Long found a plant at Mandurang about 1925. The curator of the Bendigo gardens (late Mr. F. Campbell) took cuttings, but was not successful with them.

In 1930 Mrs. Pearse of South Lockwood found a plant which disappeared two years later. We saw a spray of flowers from this plant.

The late Mr. D. MacRae of 'Breadalbane' Sutton Grange, told us of a plant found at Barker's Creek about 1934. This was transplanted to a reserve (now the Kaweka Sanctuary, Castle-maine). This plant died.

You will know Mr. R. Eddy found a plant at Diamond Hill, and Mr. J. Semmens found one on his property at Sedgwick.

By 1939 plants were freely available from nurseries, propagated by Rimingtons Nurseries of Kew, from the plant at Sedgwick, on the property of Mr. J. Semmens.

Whilst interested in all varieties of wild flowers, each Spring finds us looking hopefully for further plants of the one we most admire, the double *Eriostemon*.

F.C. TAYLOR

COPY OF LETTER REFERRED TO IN THIS ARTICLE

Dear Mr. Taylor,

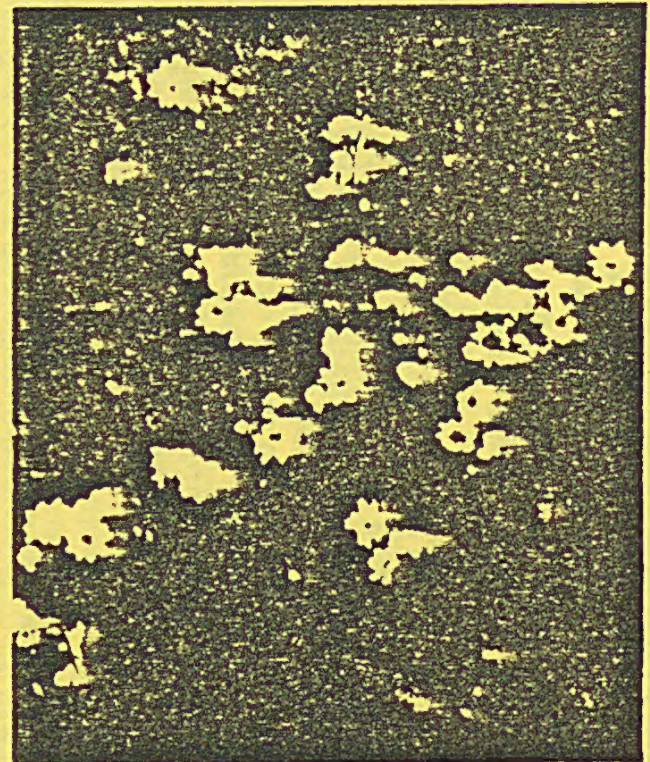
Thank you very much for your very fine box of orchids. They made quite a fine display on our table. We had over forty species present. Yours were very good, and more than welcome. The albino forms were interesting and so was the one with the three flowers on one stem. This is rare.

But your real surprise was the gloriously exquisite bunch of the Double Fairy Wax Flower, *Eriostemon obovalis*. My word, it created quite a sensation, and I have no hesitation in saying that it was the really best thing in the whole Show. How lovely it is. And where-ever did you get it? Could you spare me a few more twigs or sprays? The Botanic Gardens folk wish to try and propagate the cuttings. It would really be worth growing in our gardens.

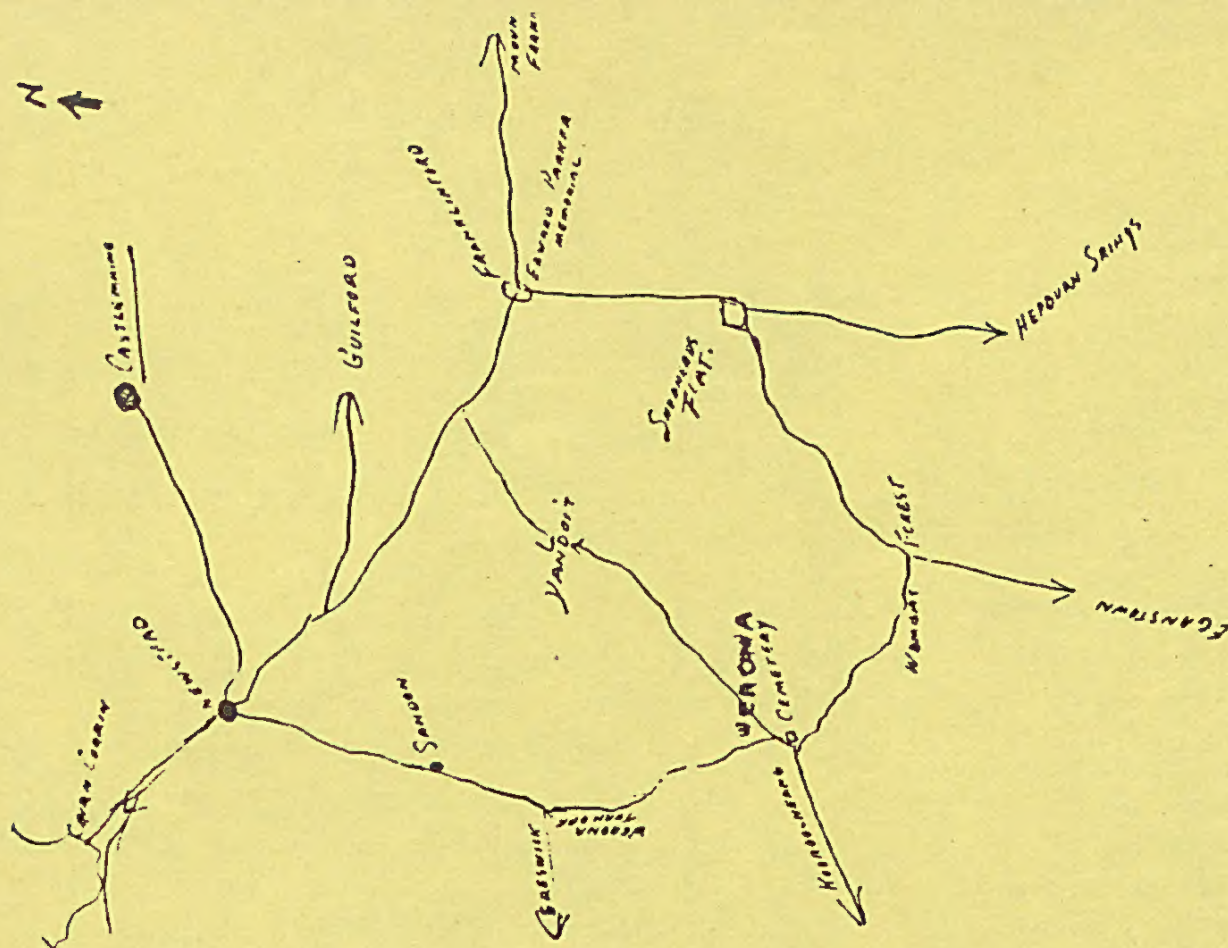
Thanks again for all the good things - they are always welcome.

With kind regards to all,

Yours sincerely,
Ed. E. Pescott



Our picture shows a print made from the negative supplied by Miss Bennett and actually taken in 1918 by her father. It shows one of the plants of Bendigo Waxflower Double Form that was then growing at Longlea.



VERONA'S WHEREABOUTS

Castlemaine to Verona Town 30 KL
 Town to Cemetery 8 KL
 Cemetery to Newstead 10 KL
 Newstead to Frankston 7 KL
 FRANKSTON TO CASTLEMAINE 30 KL TOTAL 85 KL

From the 'Mount Alexander Mail' July 16th., 1892 -

"A Guildford correspondent reported the killing of a large spotted Native Cat, which he surprised among his ducks"...

Some sportsman shot a wild turkey near Newstead. He reported an inventory of its "stomach" as follows: Field mice, a small snake, roots, grubs, beetles, and a woven network of copper wire from a Heley's pattern cartridge. The latter had only suffered compression - - "it being awaiting the time for good digestion to wait upon appetite, which had been anticipated, however by the shot of a sportsman "

Contributed by Ray Bradfield.

FROST DAMAGE

A SPECIAL REQUEST IS BEING MADE TO MEMBERS TO BE READY AT THE MEETING TO REPORT ON HOW THE TREES IN THEIR AREA HAVE WITHSTOOD OR SUCCEMBED TO THE FROSTS THIS YEAR.

CLUB PROGRAMME

Meetings

Friday Sept 10

'Parsonic Perambulations'
a wander around Katamatite
with the Elliott family

Thursday Sept 23

Business meeting at 7.30pm

Friday Oct 8

A Forestry Officer in Victoria
Mr Doug Stevenson.

Thursday Oct 28

Business meeting

Wednesday Afternoon Outings

Wed Sept 15 Boronia at Vaughan
Leader F. Blake. Leave from
Campbells Creek State School.

Wed Sept 22 Kalimna. Leader
E. Perkins. Meet at the highest
point (the Lookout) on the
road above the High School.

Wed Sept 29 Buttercup area of
Muckleford Forest. Leader
G. Sitch. Meet at Castlemaine
Golf Clubhouse.

Wed Oct 6 Campbells Creek
Leader Terry Collins. Meet
Campbells Creek State School.

Meet At 4.30pm.

Meetings are held on the second
Friday of each month in the
Education Centre (in the SEC
building, Mostyn Street) at
8 pm.

Outings leave from the Ed Centre
at 1.30pm sharp on the Saturday
after the general meeting unless
otherwise stated.

FESTIVAL EXCURSION The Wildflower Tour to be held during the
Festival will be held on Saturday 30 Oct., leaving for Muckleford
from the Castlemaine Railway Station at 2pm.

Outings

Saturday Sept 11

Merona (sketch map inside) (p7.)
Leaders F Blake and G Sitch.

MONDAY Sept 20

Annual Showday Walk.

Leave Ed Centre at 9 am. TRANSPORT is required to take walkers to the start of the walk at the South end of Porcupine Ridge and/or at the end of the walk, which will be Guildford. A phone call will be made at the end of the walk to notify drivers of the pickup point.

Walkers will need food and drink for the day

A request for volunteers for transport will be made at the Sept. Meeting

Sunday Oct 3

Fryers Ridge. Joint excursion with Bendigo F.N.C.

Leave Market at 10.30 am.

Sunday Oct 17

Stuart Mill. Joint excursion with Maryborough F.N.C.

Leave Ed Centre at 9.45am. Meet Maryborough club at the Maryborough Post Office at 10.30 am.

Sat-Sun Oct 23 & 24

W.V.F.N.C.A. campout at Creswick, hosted by the Creswick club.
(details inside on p.2)

Saturday Nov 13

Lyal Glen, Leader Jack Bellham of Bendigo F.N.C.